

Notice of Allowability

Application No.

10/075,371

Examiner

Brian J. Sines

Applicant(s)

HANDIQUE ET AL.

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1743

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the response filed 3/13/2007.
2. ☒ The allowed claim(s) is/are 32-84.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

DETAILED ACTION

Drawings

The drawings were received on 3/13/2007. These drawings are acceptable.

Response to Arguments

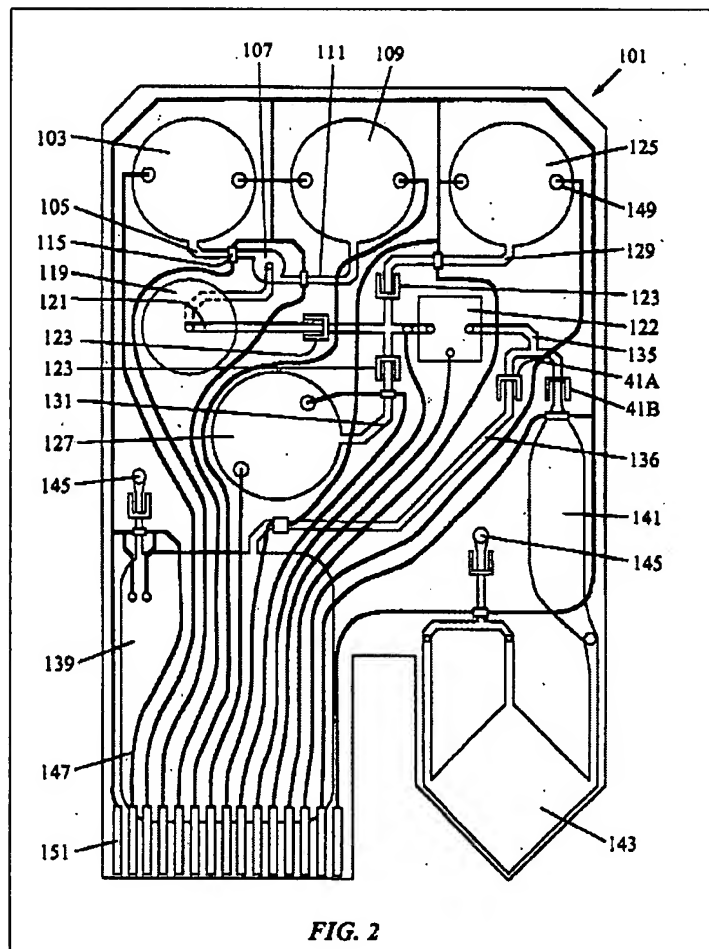
Applicant's arguments and amendments, filed 3/13/2007, with respect to the rejections in the office action mailed 9/13/2006 have been fully considered and are persuasive. These rejections have been withdrawn.

Allowable Subject Matter

Claims 32 – 84 are allowed.

The following is an examiner's statement of reasons for allowance:

Pourahmadi (U.S. Pat. No. 6,664,104 B2) teaches a microfluidic device 101 comprising: a flow-through component 122; a cell lysing module 119; a mixing module 107; and a DNA manipulation module 143 for performing PCR amplification (see col. 4, line 65 – col. 6, line 47; figure 2). Pourahmadi teaches the incorporation of valves for facilitating fluid flow control within the disclosed microfluidic device (see, e.g., col. 14, lines 39 – 51).



Handique (U.S. Pat. No. 6,130,098 A) teaches a system and methods for microdroplet preparation with microfluidic devices. Handique further teaches a thermopneumatic apparatus for facilitating fluid transport in microfluidic devices (see col. 13, line 60 – col. 15, line 40; figures 3A, 3B, 4A & 4B).

Regarding claim 32, the cited prior art neither teach nor fairly suggest a microfluidic device comprising a microfluidic network comprising several sample processing modules operatively connected by one or more channels and associated valve and actuator systems as claimed, wherein the microfluidic network is comprising: an enrichment module configured to accept a particle containing fluid sample and that creates an enriched sample therefrom; a

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microdroplet preparation module configured to receive the enriched sample and to create a microdroplet therefrom; a cell lysing module configured to lyse the microdroplet of enriched sample; a mixing module configured to mix one or more reagents and the enriched sample; and a DNA manipulation module configured to receive the enriched sample mixed with one or more reagents for further processing.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

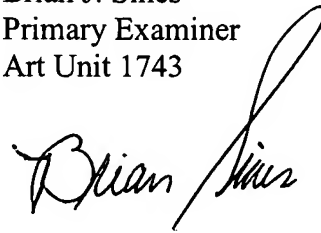
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian J. Sines whose telephone number is (571) 272-1263. The examiner can normally be reached on Monday - Friday (11 AM - 8 PM EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill A. Warden can be reached on (571) 272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Brian J. Sines
Primary Examiner
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A handwritten signature in black ink, appearing to read "Brian Sines", with a large, stylized loop at the end of the last name.